# Rahul Singhal

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1133761/publications.pdf

Version: 2024-02-01

| 61 | 856 | 471509 | 526287 |
|---|---|---|---|
| papers | citations | 17 | 27 |
| | | h-index | g-index |

| 62 | 62 | 62 | 1224 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Microâ€morphological investigations on wettability of Alâ€incorporated câ€Si thin films using statistical surface roughness parameters. Surface and Interface Analysis, 2022, 54, 174-186. | 1.8 | 3 |
| 2 | New Medium Bandgap Donor Dâ€A<sub>1</sub>â€Dâ€A<sub>2</sub> Type Copolymers Based on Anthra[1,2â€b:4,3â€bâ€œ:6,7â€câ€²] Trithiopheneâ€8,12â€dione Groups for Highâ€Efficient Nonâ€Fullerene Polymer Solar Cells. Macromolecular Rapid Communications, 2022, 43, e2100839. | 3.9 | 9 |
| 3 | Fieldâ€Assisted Sensitivity Amplification in a Noble Metal Nanoparticle Decorated WO<sub>3</sub>/GO Hybrid FETâ€Based Multisensory Array for Selective Detection of Breath Acetone. ChemNanoMat, 2022, 8, . | 2.8 | 10 |
| 4 | Tuning the antimicrobial efficacy of nano-Ca(OH)2 against E. coli using molarity. Journal of Materials Science, 2022, 57, 8241-8261. | 3.7 | 7 |
| 5 | Effect of Molarity on Methylene Blue Dye Removal Efficacy of Nano Ca(OH)<sub>2</sub>. ChemistrySelect, 2022, 7, . | 1.5 | 5 |
| 6 | High-Efficiency Ternary Organic Solar Cells Enabled by Synergizing Dicyanomethylene-Functionalized Coumarin Donors and Fullerene-Free Acceptors. ACS Applied Energy Materials, 2022, 5, 9020-9030. | 5.1 | 7 |
| 7 | Reducing Energy Loss in Organic Solar Cells by Changing the Central Metal in Metalloporphyrins. ChemSusChem, 2021, 14, 3494-3501. | 6.8 | 5 |
| 8 | Receding horizon control based on prioritised multi-operational ranges for greenhouse environment regulation. Computers and Electronics in Agriculture, 2021, 180, 105840. | 7.7 | 5 |
| 9 | Multi-objective re-tuning of nonlinear model for degrading greenhouse. Progress in Artificial Intelligence, 2021, 10, 37-48. | 2.4 | 0 |
| 10 | Energy-level modulation of coumarin-based molecular donors for efficient all small molecule fullerene-free organic solar cells. Journal of Materials Chemistry A, 2021, 9, 1563-1573. | 10.3 | 18 |
| 11 | Fullerene/Non-fullerene Alloy for High-Performance All-Small-Molecule Organic Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 6461-6469. | 8.0 | 17 |
| 12 | Nonclassical nature of thermal quantum states in the oscillating FRW Universe. European Physical Journal Plus, 2021, 136, 1. | 2.6 | 1 |
| 13 | Effect of concentration on lattice strain, dielectric properties and activation energy of CoFe2O4/BaTiO3 nanocomposites. Applied Physics A: Materials Science and Processing, 2021, 127, 1. | 2.3 | 6 |
| 14 | Effect of annealing and swift heavy ions irradiation on vanadium oxide thin films. Radiation Effects and Defects in Solids, 2021, 176, 673-680. | 1.2 | 5 |
| 15 | Fullerene-Free All-Small-Molecule Ternary Organic Solar Cells with Two Compatible Fullerene-Free Acceptors and a Coumarin Donor Enabling a Power Conversion Efficiency of 14.5%. ACS Applied Energy Materials, 2021, 4, 11537-11544. | 5.1 | 7 |
| 16 | Phase transformation by the irradiation with swift heavy ions on vanadium oxide thin films. Radiation Effects and Defects in Solids, 2020, 175, 450-457. | 1.2 | 1 |
| 17 | Enhancing Non-linear Response of Fullerene via Incorporation of Gold Nanoparticles. Plasmonics, 2020, 15, 361-370. | 3.4 | 1 |
| 18 | Morphology Controlled CuO Nanostructures for Efficient Catalytic Reduction of 4-Nitrophenol. Catalysis Letters, 2020, 150, 471-481. | 2.6 | 21 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Ternary Organic Solar Cell with a Nearâ€Infrared Absorbing Selenopheneâ€“Diketopyrrolopyrroleâ€Based Nonfullerene Acceptor and an Efficiency above 10%. Solar Rrl, 2020, 4, 1900471. | 5.8 | 21 |
| 20 | Enhancement of photovoltaic efficiency through fine adjustment of indaceneâ€based nonâ€fullerene acceptor by minimal chlorination for polymer solar cells. Nano Select, 2020, 1, 320-333. | 3.7 | 11 |
| 21 | Edge plane pyrolytic graphite as a sensing surface for the determination of fluvoxamine in urine samples of obsessive-compulsive disorder patients. Biosensors and Bioelectronics, 2020, 168, 112489. | 10.1 | 7 |
| 22 | Ternary Allâ€Smallâ€Molecule Solar Cells with Two Smallâ€Molecule Donors and Y6 Nonfullerene Acceptor with a Power Conversion Efficiency over Above 14% Processed from a Nonhalogenated Solvent. Solar Rrl, 2020, 4, 2000460. | 5.8 | 13 |
| 23 | Efficient Fullerene-Free Organic Solar Cells Using a Coumarin-Based Wide-Band-Gap Donor Material. ACS Applied Materials & Interfaces, 2020, 12, 41869-41876. | 8.0 | 21 |
| 24 | Ternary Allâ€Smallâ€Molecule Solar Cells with Two Smallâ€Molecule Donors and Y6 Nonfullerene Acceptor with a Power Conversion Efficiency over Above 14% Processed from a Nonhalogenated Solvent. Solar Rrl, 2020, 4, 2070115. | 5.8 | 0 |
| 25 | Highly efficient ternary polymer solar cell with two non-fullerene acceptors. Solar Energy, 2020, 199, 530-537. | 6.1 | 8 |
| 26 | The influence of the terminal acceptor and oligomer length on the photovoltaic properties of Aâ€“Dâ€“A small molecule donors. Journal of Materials Chemistry C, 2020, 8, 4763-4770. | 5.5 | 15 |
| 27 | Robust Shortest Path Planning for Aircraft using Bounded Region Voronoi Diagram. , 2020, , . | | 1 |
| 28 | Trajectory Tracking based on Adaptive Weights Receding Horizon Control by Differential Drive Robot. , 2020, , . | | 1 |
| 29 | Shortest Path Evaluation with Enhanced Linear Graph and Dijkstra Algorithm. , 2020, , . | | 3 |
| 30 | Surface patterning of high density polyethylene by oblique argon ion irradiation. Journal of Applied Physics, 2019, 126, . | 2.5 | 5 |
| 31 | Adaptive Reference Receding Horizon Control of Greenhouse. , 2019, , . | | 2 |
| 32 | Enhanced room temperature ferromagnetism and green photoluminescence in Cu doped ZnO thin film synthesised by neutral beam sputtering. Scientific Reports, 2019, 9, 6675. | 3.3 | 86 |
| 33 | Large Tuning of Surface Plasmon Resonance of Auâ€“Fullerene Nanocomposite. Electronic Materials Letters, 2019, 15, 111-118. | 2.2 | 7 |
| 34 | Low Energy Loss of 0.57 eV and High Efficiency of 8.80% in Porphyrin-Based BHJ Solar Cells. ACS Applied Energy Materials, 2018, 1, 1304-1315. | 5.1 | 15 |
| 35 | A non-fullerene all small molecule solar cell constructed with a diketopyrrolopyrrole-based acceptor having a power conversion efficiency higher than 9% and an energy loss of 0.54 eV. Journal of Materials Chemistry A, 2018, 6, 11714-11724. | 10.3 | 49 |
| 36 | Effect of crystallographic orientation on structural and mechanical behaviors of Niâ€“Ti thin films irradiated by Ag7+ ions. Applied Physics A: Materials Science and Processing, 2018, 124, 1. | 2.3 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Modulation of the power conversion efficiency of organic solar cells via architectural variation of a promising non-fullerene acceptor. Journal of Materials Chemistry A, 2018, 6, 574-582. | 10.3 | 13 |
| 38 | Receding Horizon Control of Greenhouse Integrated with Fogger and Rooftop Wind Turbine. , 2018, , . | | 0 |
| 39 | Discretization schemes Comparison for the Greenhouse Temperature Model. , 2018, , . | | 1 |
| 40 | Receding Horizon Control of Naturally Ventilated Greenhouse with Rooftop Wind Turbine. , 2018, , . | | 1 |
| 41 | Ni-Porphyrin-based small molecule for efficient organic solar cells (>9.0%) with a high open circuit voltage of over 1.0 V and low energy loss. Chemical Communications, 2018, 54, 14144-14147. | 4.1 | 19 |
| 42 | Reduced Energy Offsets and Low Energy Losses Lead to Efficient (â¼10% at 1 sun) Ternary Organic Solar Cells. ACS Energy Letters, 2018, 3, 2418-2424. | 17.4 | 20 |
| 43 | Study on copperâ€“fullerene nanocomposite irradiated by 120â¯MeV Au ions. Radiation Physics and Chemistry, 2018, 151, 276-282. | 2.8 | 5 |
| 44 | Investigation of C60 and C70 fullerenes under low energy ion impact. Journal of Materials Science: Materials in Electronics, 2018, 29, 14762-14773. | 2.2 | 5 |
| 45 | Low Energy Gap Triphenylamineâ€“Heteropentaceneâ€“Dicyanovinyl Triad for Solution-Processed Bulk-Heterojunction Solar Cells. Journal of Physical Chemistry C, 2018, 122, 11262-11269. | 3.1 | 8 |
| 46 | Corrole-BODIPY Dyad as Small-Molecule Donor for Bulk Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 31462-31471. | 8.0 | 36 |
| 47 | Comparative study on the photovoltaic characteristics of Aâ€“Dâ€“A and Dâ€“Aâ€“D molecules based on Zn-porphyrin; a Dâ€“Aâ€“D molecule with over 8.0% efficiency. Journal of Materials Chemistry A, 2017, 5, 1057-1065. | 10.3 | 49 |
| 48 | Unprecedented low energy losses in organic solar cells with high external quantum efficiencies by employing non-fullerene electron acceptors. Journal of Materials Chemistry A, 2017, 5, 14887-14897. | 10.3 | 38 |
| 49 | Efficient Polymer Solar Cells with High Open-Circuit Voltage Containing Diketopyrrolopyrrole-Based Non-Fullerene Acceptor Core End-Capped with Rhodanine Units. ACS Applied Materials & Interfaces, 2017, 9, 11739-11748. | 8.0 | 43 |
| 50 | Porphyrin based pushâ€“pull conjugates as donors for solution-processed bulk heterojunction solar cells: a case of metal-dependent power conversion efficiency. Journal of Materials Chemistry A, 2017, 5, 15529-15533. | 10.3 | 21 |
| 51 | Synthesis of Ag metallic nanoparticles by 120â€‰keV Agâ‚‚ ion implantation in TiO2 matrix. Radiation Effects and Defects in Solids, 2017, 172, 896-902. | 1.2 | 2 |
| 52 | Receding horizon based greenhouse air temperature control using grey wolf optimization algorithm. , 2016, , . | | 6 |
| 53 | 3D trajectory tracking for a quadcopter using MPC on a 3D terrain. , 2015, , . | | 3 |
| 54 | Thickness dependent phase transformation of magnetron-sputtered Niâ€“Mnâ€“Sn ferromagnetic shape memory alloy thin films. Journal of Nanoparticle Research, 2011, 13, 3975-3990. | 1.9 | 44 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Electronic excitation induced controlled modifications of semiconductor-to-metal transition in epitaxial VO<sub>2</sub> thin films. Journal of Materials Research, 2011, 26, 2901-2906. | 2.6 | 41 |
| 56 | Studies on Carbon Nanotubes and Fullerenes Under Extreme Conditions. Journal of Nanoscience and Nanotechnology, 2010, 10, 3767-3779. | 0.9 | 19 |
| 57 | Microcontroller Based Polyhouse Automation Controller. , 2010, , . | | 10 |
| 58 | Studies on the development of biodegradable poly(HEMA)/Cloisite nanocomposites. Polymer Composites, 2009, 30, 887-890. | 4.6 | 12 |
| 59 | Swift heavy ion induced modifications of fullerene C70 thin films. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 3257-3262. | 1.4 | 37 |
| 60 | Development of nanocomposites of bentonite with polyaniline and poly(methacrylic acid). Journal of Applied Polymer Science, 2007, 103, 3299-3306. | 2.6 | 17 |
| 61 | Synthesis and characterization of novel poly(oâ€toluidine) montmorillonite nanocomposites: Effect of surfactant on intercalation. Journal of Applied Polymer Science, 2007, 106, 1909-1916. | 2.6 | 8 |